DOCUMENT RESUME

ED 351 087 JC 920 574

AUTHOR	Cohen, Arthur M.
TITLE	Calculating the Rate of Transfer from Community Colleges to Public Universities in California. A Report to the California Policy Seminar.
INSTITUTION	California Univ., Los Angeles. Dept. of Higher Education.
PUB DATE	Dec 92
NOTE	31p.
PUB TYPE	Reports - Descriptive (141) -- Viewpoints (Opinion/Position Papers, Essays, etc.) (120)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Articulation (Education); *College Transfer Students; Community Colleges; Data Collection; Definitions; *Educational Mobility; Higher Education; Policy Formation; Research Problems; State Standards; State Universities; *Statewide Planning; *Transfer Policy; *Transfer Programs; Two Year Colleges; Two Year College Students
IDENTIFIERS	*California Community Colleges; *Transfer Rates (College)

ABSTRACT

Issues surrounding the transfer function of California's community colleges are analyzed in this report. First, a historical overview is provided of the role of community colleges, their relationship to the California State University and the University of California systems, and expectations concerning transfer. Next, problems associated with transfer rates are described, including the lack of reliable baseline data, the fear among administrators of the comparison of institutional transfer rates, and inconsistencies in the definition used to calculate rates. Activities undertaken to address these problems by the Center for the Study of Community Colleges (CSCC), in Los Angeles, the statewide Transfer Assembly, and the Standing Committee on Transfer and Articulation of the Intersegmental Coordinating Council are highlighted. Next, drawing on CSCC studies, transfer rates are provided for California, Texas, and Illinois, and detailed explanations of the differences in these rates are examined, emphasizing variations among the states in expenditures, in the structure of their higher education systems, in general expectations regarding access and student flow, and in student fees. Statewide efforts initiated since 1984 to augment student flow among California's public colleges are then reviewed. Finally, forthcoming issues on transfer are analyzed, suggesting specific actions that the legislature, the community colleges, and the universities might take to enhance transfer; and reiterating the importance of consistent data collection. A partial list of recent reports on transfer in California is appended. (MAB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED351087

CALCULATING THE RATE OF TRANSFER FROM COMMUNITY COLLEGES TO PUBLIC UNIVERSITIES IN CALIFORNIA

A Report to the California Policy Seminar

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
A. M. Cohen

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

by

Arthur M. Cohen
Department of Education
University of California, Los Angeles

December 1992

JC 920 574

BEST COPY AVAILABLE

The transfer of students from community colleges to universities in California has been a prominent feature of the state's higher education system since early in the century. The original California law authorizing secondary school boards to offer post-graduate courses specified that those courses "shall approximate the studies prescribed in the first two years of university courses." When Fresno organized its junior college in 1910, one of its presenting arguments was that there was no university within nearly 200 miles of the city and that its young people needed a local institution in which they could begin their postsecondary studies. The presumption then, as since, was that students would be enabled to take freshman and sophomore courses in their hometown and then those who wished would subsequently migrate to the state's universities.

As the junior colleges spread through the state they served as the point of first entry to higher education for most of the students attending them. And as the colleges gained an ever-increasing share of these first-time students the concern grew that such students should have the opportunity of transferring to one of the state's universities, there to complete baccalaureate studies. Nonetheless, the fact that the junior colleges were organized originally as part of the secondary school system and because they were all independent institutions operating

under local governing boards, the notion of systematic free flow between them and the universities never quite established itself.

Throughout the history of the institutions the difficulty in student transfer was recognized repeatedly. During the 1960s, when higher education was expanding rapidly, the exchange of students and student credits among the sectors became a major item of debate in state meetings. As only one example among many, a *Los Angeles Times* article began, "The University of California and the California State Colleges came under fire Monday for making students' transfers from the state's junior colleges too difficult." (Trombley, 1966).

The University of California generally supported the establishment of the junior colleges because they freed it from having to be concerned with enrollment pressures in the lower division. The intention was for the junior colleges to admit the majority of the first-time enrollees, sort through to determine which ones were suited for baccalaureate studies, provide remedial education for those who were not, and thus relieve the university to concentrate on other educational functions. The junior colleges thrived on this type of support. Just twenty-five years ago the Coordinating Council for Higher Education "recommended that the University of California encourage applicants to attend junior colleges in order to ease enrollment pressures in the lower division." ("CCHE Encourages...," 1967). The

California Master Plan for Higher Education also had called for the diversion of substantial numbers of students to junior colleges where they could find undergraduate courses enabling them to begin their collegiate careers.

These arrangements helped to build California public higher education into the most accessible system in the nation. But the system was not without its critics. Allegations that minority-group students were being diverted to the two-year colleges and then facing difficulty in transferring have been raised continually (Richardson and de los Santos, 1988). Proposals have been made to require the universities to admit qualified community college transfers into programs of the student's choice. Most recently the issue of transfer policy has been argued in the context of budgets, with the California State University and the University of California imposing restrictions on the acceptance of lower-division transfers because they do not have sufficient funds to mount the requisite number of undergraduate classes on all campuses (Pederson, 1991).

As the higher education budgets come under increasing pressure and as the state's population and the concomitant desire for postsecondary study grows, these arguments are certain to continue. The community colleges could not function as the point of first entry to higher education for most of the people who begin postsecondary study in California if their students did not have a reasonable expectation of transferring after completing a certain

number of lower division courses. And because the revised Master Plan restated the necessity for the universities making place for qualified transfers, those expectations remain in effect.

TRANSFER RATES: DEFINITION

How many students transfer? Information on the number of students beginning their higher education in a community college and subsequently moving on to a university is essential if the effects of state and institutional policies are to be assessed. How much does a newly installed program articulation agreement affect student flow? What are guaranteed student placements at the university worth in terms of enhanced transfer? Before the effects of state policies can be estimated, certain baseline data are essential.

Although the technology for tracking students on a statewide basis has been available for decades, few states have built integrated systems to monitor the movement of students between institutions or between sectors. Several reasons have impeded the development of this capacity: a tradition of independence among individual colleges and universities; the growth of separately organized, funded, and managed sectors within higher education; and a prevalent attitude of indifference regarding students who are not at that time enrolled in the institution which is being asked to provide the data. Compounding these reasons is the fear among some college administrators that transfer rates

calculated according to a uniform definition may be used to make odious comparisons between institutions.

At the same time, calls for institutional accountability that have occurred with increasing frequency in legislatures across the nation, and recent federal rulings regarding "Student-Right-to-Know (Korb, 1992)," have led to student tracking capacities in some states. The leaders in effecting these integrated data systems have been the states where higher education is closely coordinated at the state agency level: Illinois, Kentucky, Washington, and Texas, to name a few. However where there is somewhat less state level coordination, student tracking systems are inchoate: included among these are Kansas, Idaho, Mississippi, Ohio, Pennsylvania. In all, around one-third of the states now have the capacity for tracking students across the public higher education sector and among institutions within the sectors.

California is an example of a state where the three major public higher education sectors are only loosely coordinated, hence California does not have an integrated student tracking system. The University of California and the California State University system each have statewide student databases. The community colleges have not yet developed that capacity in a statewide system. This in no way suggests that data about the state's community college students are not available; it merely points out that a

records system from which students can be traced across the sectors is not in place.

Data capabilities are only part of the problem. To date the higher education sectors have not agreed on a standard definition for calculating the transfer rates. Who shall be included in the pool of potential transfers: All community college students? Only those students intending to transfer? Full time students only? Students just out of high school? Students eligible for university entry as freshmen? A second issue of definition centers on the time to be considered between a student's entry and transfer. Few students matriculate at community colleges and progress full time through the first two years of collegiate studies, and enter the university at the junior level in their third year out of high school. The time between college entry and transfer to the university may stretch out indefinitely as students drop in and out, attending part time, taking courses that may or may not qualify for university transfer credit. Shall we count only those who transfer within four or five years? Or shall we keep the books open indefinitely?

For the past three years the Center for the Study of Community Colleges (CSCC) has coordinated the Transfer Assembly, a group of colleges and state agencies across the nation that are concerned with transfer data and definitions. After convening several conferences and participating in several more, and after interacting with

numerous practitioners, the CSCC staff standardized the definition of transfer rate as *all students entering the two-year college in a given year who have no prior college experience and who complete at least 12 college credit units within four years, divided into the number of that group who take one or more classes at a university within four years.*

The Standing Committee on Transfer and Articulation of the Intersegmental Coordinating Council (ICC), the administrative arm of the California Educational Round Table, has also wrestled with the important question of establishing a common standard. After a two-year review of the various definitions in use or being proposed by the groups studying transfer in California and elsewhere, the Committee's Data Needs Task Force concluded that, "Among the longitudinal rate methodologies considered by the Task Force, the Transfer Assembly rate...was judged the most useful....The 12-unit requirement, which confines the rate's denominator to students who behaviorally demonstrate pursuit of the transfer curriculum...enhances the rate's construct validity; and its longitudinal nature guarantees group- and time-equivalence validity (Intersegmental Coordinating Council, 1992)." Although the Task Force proposed certain modifications to the Transfer Assembly's definition, it recommended that the ICC adopt its basic premises.

TRANSFER RATES: DATA

In the process of stabilizing the definition, CSCC has solicited data annually since 1989 from a sample of 240 of

the nation's public and private community colleges. As noted in table one, the number of colleges supplying data grew each year, so that by the last reported year, 155 of the 1050 public two-year institutions in the nation were participating. In each case data were collected regarding the cohort of students entering college for the first time in the given year and calculations were made to determine the number of that entering cohort that received at least 12 college credits at the community college, divided into the number of the group who had matriculated at one of the state's public universities within the ensuing four years. Because of the larger samples and the continued effort to obtain more consistent data, the last year should be considered the most reliable.

The data collected from California, Illinois, and Texas, the nation's top three states in number of community college students, are particularly noteworthy (Table 2). Each of the three states provided the data in a slightly different way. In Illinois the Illinois Community College Board collected the data from the participating community colleges and arranged to have those data matched with the universities that had submitted student data to the Illinois Board of Higher Education. In Texas the public institutions are linked through the Texas State Coordinating Board. There the state agency information specialists collected data on students who entered and completed 12 units from the

community colleges that chose to participate and matched them with the state university data files.

In California the CSCC staff solicited data on students entering and completing 12 units from each of the state's 107 community colleges. Specifications for arraying the data on disks were sent to the 49 colleges that agreed to participate. CSCC then contracted with CSU to take the disks that the colleges sent and run a match against the CSU systemwide records for the four years following the date that the cohort entered. The CSCC obtained a student-record tape from the University of California system for the given years and did the matching of the disks with those data. The CSU and UC data then were merged to yield the statewide public institution transfer rate.

Tables one and two show the number and percent of entrants receiving 12 or more credits and the transfer rate for each of the three years.

WHY THE DIFFERENCE?

The ratio of students receiving at least 12 credits at a community college within four years--44.3% percent of the entrants in California, 47.1 percent in Illinois, and 56.2 percent in Texas--and the difference in transfer rates--20.8 percent for California, 21.5 percent for Illinois, and 28.2 percent for Texas--point to some intriguing questions. Why should the patterns be similar in California and Illinois and different for Texas? A single college may have peculiarities militating against transfer--a great distance

from any university campus, for example, or a student body comprised almost entirely of low-income people. But what accounts for the similarities and differences among states?

Clues are often sought by viewing the differences in student demographics, college admissions policies, and on-campus incentives.

- Demographic characteristics of the students in the three states include an ethnic minority enrollment in California community colleges at 35 percent of the total student body; in Texas it is 32 percent; and in Illinois 27 percent. This seems not an explanatory factor, especially because the differences in transfer rates by ethnicity were greater for the sample as a whole than they were for the students within each college. For example, one college's transfer rates were 12.7 percent for its black students, 11.3 percent for its Hispanics, and 13.8 percent for its whites, whereas in another college, the transfer rates were 20.0 percent for the blacks, 19.9 percent for the Hispanics, and 19.8 percent for the whites. Thus, the aggregate data make it appear as though the colleges pass the ethnic groups through at differing rates. However this effect is caused by variations among the colleges. Whether a college has a high or low transfer rate overall, it typically has a similar transfer rate for all

TABLE 1

Center for the Study of Community Colleges Transfer Assembly

National Transfer Data 1984--1986

Entrants with No Prior College Experience

1984	48 colleges	N=77,903
1985	114 colleges	N=191,748
1986	155 colleges	N=267,150

Entrants Receiving 12+ Credits Within Four Years

1984	39,351	50.5%
1985	89,638	46.7%
1986	124,885	46.7%

Transfers Within Four Years

1984	9,316	23.7%
1985	21,171	23.6%
1986	29,180	23.4%

TABLE 2
CALIFORNIA, ILLINOIS,TEXAS DATA -- 1984-1986

1984

	California (N=8)	Illinois (N=9)	Texas (N=8)
a) Entrants	12,758	13,334	12,686
b) 12+ Credits	4,722 (b/a=37.4%)	4,772 (b/a=35.8%)	5,254 (b/a=41.4%)
c) Transfers	967 (c/b=20.3%)	968 (c/b=20.3%)	1,243 (c/b=23.7%)

1985

	California (N=29)	Illinois (N=13)	Texas (N=16)
a) Entrants	84,260	19,078	24,250
b) 12+ Credits	28,857 (b/a=34.2%)	9,277 (b/a=48.6%)	12,065 (b/a=49.8%)
c) Transfers	5,843 (c/b=20.2%)	1,496 (c/b=16.1%)	2,816 (c/b=23.3%)

1986

	California (N=49)	Illinois (N=39)	Texas (N=29)
a) Entrants	135,806	46,106	34,825
b) 12+ Credits	60,160 (b/a=44.3%)	21,700 (b/a=47.1%)	19,586 (b/a=56.2%)
c) Transfers	12,518 (c/b=20.8%)	5,246 (c/b=24.2%)	5,52 (c/b=28.2%)

Notes: a)=The number of students entering community college with no prior college experience.
b)=The number of students who received at least twelve college credits within four years after entry.
c)=The number of students in line b) who matriculated at an in-state public university within four years after initial college entry.

its students. Students of any ethnic category tend to go through any single college at the same rate.

- All three states have open admissions policies: any student who is at least 18 years old and/or who possesses a high school or G.E.D. diploma may enroll in a community college.
- All three states require that the student take a placement examination: the ACT or another nationally-normed test in Illinois, the Texas Academic Skills Program in Texas, and an exam mandated by the local institution in California, tests that are not used to limit enrollment to the institution but are to help the staff advise the students on the level of courses that they may take and the type of programs they may enter.
- All three states have common course numbering systems, general education compacts, articulation agreements, and special transfer incentive activities.

None of the foregoing characteristics of the systems seem sufficiently persuasive to account for the disparities in student achievement. The differences in the ratio of students receiving 12 or more units and in the percentage who transfer seem more likely to relate to differences in expenditures, the structure of each state's higher education

system, and in the general expectations regarding access and student flow.

Funding for the colleges is slightly disparate. Education and General expenditures per full-time equivalent student in 1986-87 were $3920 in California, $3646 in Illinois, and $4264 in Texas community colleges. The average annual salary for a full-time instructor was $37,266 in California, $34,067 in Illinois, and $29,972 in Texas (which does not have mandatory collective bargaining). Texas colleges may be devoting more funds to student support services outside the classroom but the way that expenditures are calculated does not make for feasible comparisons.

A major difference is in student fees. For the years 1986 to 1990, fees for a full-time in-state community college student in California were around $112.00 to $137.00 per annum. Comparable figures in Illinois were $871.00 to $960.00 and for Texas, $300.00 to $455.00. A student may attend college in California at considerably less cost, a characteristic enhancing open access. But the minuscule tuition in California allows the students to wander in and out of the community colleges, to leave without completing any courses and to return with practically no fiscal penalty. A student may take a course at low cost merely for personal interest; signing up for a college-credit physical education class makes the college's swimming pool and weight room available for less than the cost of a private health club. California probably has a higher

proportion of casual, non-degree-oriented students than any other state. Certainly it has a higher proportion of students in physical education courses; 26.5 percent of the non-liberal arts enrollment is in physical education and other personal skills courses, compared with 19.1 percent for the nation (Center for the Study of Community Colleges, 1992). That might account in some measure for the low ratio of students completing as many as four courses in four years.

The difference between community college and university fees is also disparate. The California community college fees are so low in comparison with the university tuition that a student moving from one to the other faces a major cost increase. However, in Texas the university fees average only around $300 per year more than those at the colleges.

The lower transfer rate in California may be related to the higher education system's structure. Both Illinois and Texas have upper-division universities that are designed to take community college transfers at the junior level. The two in Illinois are not major receivers in terms of the number of students transferring in that state but Texas has eight such institutions and they account for a sizable proportion of the movement.

The systems' policies also affect transfer rates. A student who enters a community college in Illinois or Texas may transfer to a public university at any time; no minimum

number of credits is required; the students wishing to transfer apply to the university of choice and have their course work evaluated for acceptance. In California the student who starts in a community college may not transfer to UC until completing 56 units, essentially two years of full time study. And CSU has recently increased its transfer requirements from 12 to 30 community college units for students who were not eligible for entrance as freshmen.

California's dual university system may also contribute to its lower transfer rate. The community colleges each have varying numbers of courses for which a student may receive graduation credit at CSU and other numbers of courses for which credit may be transferred to UC. As example, 88 percent of the non-liberal arts courses offered at Skyline College in the Spring of 1991 carried CSU transfer credit whereas only 20 percent of the courses could be transferred to UC. At Los Angeles Mission College the comparable figures were 74 percent and 26 percent. The major reason for the disparity is that CSU has more baccalaureate programs in business and technologies similar to those emphasized in community colleges.

These patterns point to the greater difficulty a student has in making the transition to UC and also to the difficulty of a community college's establishing a consistent curriculum and pattern of student advisement. The effect is markedly different rates of transfer, with CSU receiving five times as many transfers as UC.

AUGMENTING TRANSFER

Every state has some sort of policy on transfer of credits but the stringency varies greatly. Some states have agreements calling for transferability of all courses, others specify a general education core and others are merely generalized statements regarding the desirability of credit transfer. Some states have state level agencies solely to deal with problems of articulation and transfer.

Periodic legislative mandates in California have attempted to stimulate the various higher education systems, institutions, and coordinating bodies to attend to student flow. A 1984 resolution called on the governing boards of the three sectors to increase the college achievement of ethnic minority students. A 1985 resolution directed CPEC to report progress in implementing these efforts. But these types of actions have limited effect. As Bender (1990) notes, "state-level information systems needed to support such decision making have been slow to be developed. Only a few states have the capability of determining whether their policies are being implemented or ignored." (p. xi) He recommends that the legislatures provide funds to develop comprehensive student data systems and patterns for tracking student flow among institutions.

Moves to develop a general education core that would satisfy CSU and UC received a boost in 1989 when UC joined CSU in delegating to the community colleges the responsibility for designating the courses that would meet

the basic general education requirements. Other moves toward effecting transfer among the segments in California include the California Articulation Number System which requires an institution to designate comparable courses in the other sectors. Therefore each campus can use its own course number and title and can also designate what is comparable to it elsewhere.

In 1989 the Joint Committee for Review of the Master Plan for Higher Education of the California Legislature pointed to the importance of the transfer function and recommended that:

> Students successfully completing transfer curriculum at the community colleges should be guaranteed by statute future enrollment as upper division students at CSU or UC. Nor should such transferring students be held to higher grade point averages.
>
> Students who are not admitted to UC or CSU as freshmen at the campus of their first choice should be guaranteed upper division admission to their first choice campus if they complete the community college transfer requirements.
>
> Every community college district should have formal agreements guaranteeing upper division enrollment in specific majors with at least three UC and five CSU campuses.
>
> Concurrent enrollment should be encouraged.
>
> Students from underrepresented groups should be afforded priority in transfer.
>
> A common core curriculum across the sectors shall be designed and implemented.
>
> Each community college campus should have a transfer counseling center.

> CPEC shall do a biannual review as to the performance of these transfer compacts and report on the effect of transfer rates.

In general, legislative mandates and resolutions, state level planning and coordinating agencies and committees, and various segmental and intersegmental coordinating bodies operate to monitor the flow of students. At the institutional level faculty to faculty articulation activities, concurrent enrollment in more than one institution, guaranteed admissions at the senior institution, and various types of student services, including testing, placement, and advising, function to smooth the process.

Numerous reports have been issued in recent years that document efforts to link programs, requirements, and information sources among California's three higher education sectors. A partial listing, attached as Appendix A, reveals state-agency interest in transfer data and articulation practices.

A few of the continuing practices should assist student flow among the sectors and eventually increase the transfer figures. These include:

> The California Articulation Number Project, which documents course equivalencies;
>
> Transfer Centers, which coordinate student advising at the community colleges;
>
> Transfer Alliance Program, which assists students transfer and builds liaison between UCLA and community college staff, members, and Transfer Opportunity Program, which does the same at UCD;

The community college matriculation activities which assist in diagnosing and advising the beginning students;

Tri-Valley Alliance fosters coordination among community colleges and CSUN;

Project ASSIST provides students with cross listings of transfer course credit and articulation agreements among the sectors.

Each of these efforts purports to make it more likely that students will learn of transfer opportunities and have their community college credits accepted when they enroll in the university. Each evidences the institutions' commitment to the transfer function. But absent a consistent transfer rate database, the programs' effects can only be estimated roughly.

FORTHCOMING ISSUES ON TRANSFER

The key question in examining transfer rates and state policies affecting them is, *Is it in the state's interest to have more students transfer from community colleges to UC and CSU*? If so, then several actions can be taken by the legislature and the community colleges.

The legislature could provide special incentives to institutions that implemented the recommendations made in the *Review of the Master Plan* (Joint Committee, 1989):

- Guaranteed junior-class placement;
- Acceptance of part-time students;
- Financial aid coverage across sectors;
- Concurrent enrollment availability;

- Course equivalency acceptance;

The colleges could take certain actions:

- Design and administer subject-area examinations to samples of all students enrolled in credit classes so that estimates can be made of student knowledge in particular disciplines;
- beginning with the programs from which most students transfer, establish college-faculty to university-faculty committees so that curriculum and concurrent enrollment for students are articulated;
- send lists annually to neighboring university campuses reporting the pertinent data about students who will be eligible for transfer and who choose to be included;
- whenever feasible, schedule second-tier, sophomore-level classes on a neighboring university's campus;
- make more on-campus employment opportunities available to students thereby encouraging the students to participate in college life.

The universities could:

- demand the associate degree before a community college student would be eligible for admission;
- give full credit toward the baccalaureate for up to 60 units of college-level study completed with a minimum grade;

- modify their junior-class admission requirements by adding the associate degree and giving the community colleges the responsibility for maintaining curriculum appropriate to the baccalaureate,thus recognizing the degree as a full-faith ticket of admission to the university.
- guarantee a place in the junior class for all students who met the criteria;

These recommendations reflect projects and programs that have been implemented piecemeal in California and elsewhere. If they were effected statewide, the foundation for the transfer function would be strengthened and transfer rates would undoubtedly rise.

A second impetus to transfer would appear if the legislature provided supplemental funds to any college that increased its rate of transfer beyond the baseline percentage derived from its prior years' rate. This would stimulate transfer-related activities at the colleges and, not least, demand accurate records and annual reports of transfer rates calculated according to a uniform standard.

If budgetary issues do not force the universities to cap enrollments (a big "If"), the next few years will see a surge in transfer rates. All the elements to support it are in place:

- the number of 18 year-olds in the state will increase;
- the colleges will not have the fiscal luxury of

expanding into new areas of service outside the mainstream of traditional curriculum;

- there will be less competition from UC and CSU for well-qualified freshmen;
- the expanding annual fee differential between the community colleges, CSU, and UC (currently approximately $300, $1600, and $3050 respectively) will encourage students to take two years of study at the colleges.

The influence of these phenomena should be traced, not because community college transfer studies are more important than job-entry programs (all the studies of California higher education done over the decades point to both as essential functions), but because reliable estimates of college contributions can be made only if valid, readily understandable data are put forward routinely.

Statewide transfer rate data should be collected consistently on an annual basis. Using the formula derived by the Center for the Study of Community Colleges would make California's data comparable with those that are available from the several other states that are participating in a multiyear national transfer assembly. Using a complementary formula (which allows for students who take more than four years to transfer) would sanction CSU's efforts to collect these data. The cost for this annual review would be modest. The important point is to establish a cohort of first-time-in-college students each year and to monitor

their progress through California's community colleges and universities.

APPENDIX A

A Partial List of Recent Reports Concerning Transfer in California

California Articulation Number System Project Office. *California Articulation Number System. Plan, Prepare, Transfer.* Sacramento: Author, 1988, 99 pp. (ED 292 506)

CALIFORNIA COMMUNITY COLLEGES, OFFICE OF THE CHANCELLOR

Cepeda, Rita, and Nelson, Kathleen. *Transfer: A Plan for the Future.* Sacramento: California Community Colleges, Office of the Chancellor, 1991. 111 pp. (ED 337 225)

Cepeda, Rita. *Adoption of the Intersegmental General Education Transfer Curriculum.* Sacramento: California Community Colleges, Office of the Chancellor, 1991. 17 pp. (ED 326 271)

Dyste, Ron, and Miner, Judy. *Second-Year Status Report on the Transfer Center Pilot Program.* Sacramento: California Community Colleges, Office of the Chancellor, 1987. 9 pp. (ED 288 578)

Farland, Ronnald, and Anderson, Connie. *Articulation with Four-Year Colleges and Universities: A Report.* Sacramento: California Community Colleges, Office of the Chancellor, 1989. 19 pp. (ED 303 224)

Farland, Ronnald, and Anderson, Connie. *The Transfer Center Project.* Sacramento: California Community Colleges, Office of the Chancellor, 1989. 42 pp. (ED 309 801)

CALIFORNIA POSTSECONDARY EDUCTION COMMISSION

California State Postsecondary Education Commission. *Strengthening Transfer and Articulation Policies and Practices in California's Colleges and Universities. Progress since 1985 and Suggestions for the Future. Commission Report 87-41.* Sacramento: Author, 1987. 100 pp. (ED 293 602)

California State Postsecondary Education Commission. *Transfer and Articulation in the 1990s: California in the Larger Picture.* Sacramento: Author, 1990. 65 pp. (ED 338 200)

California State Postsecondary Education Commission. *Progress in Implementing the Recommendations of the Commission's 1987 Report on Strengthening Transfer and Articulation. A Staff Report to the California Postsecondary Education Commission. Commission Report 88-38.* Sacramento: Author, 1988. 38 pp. (ED 302 285)

California State Postsecondary Education Commission. *Update of Community College Transfer Student Statistics, 1988-89: University of California, the California State University, and California's Independent Colleges and Universities. Commission Report 89-23.* Sacramento: Author, 1989. 93 pp. (ED 313 073)

California State Postsecondary Education Commission. *Student Profiles 1990: The First in a Series of Annual Factbooks about Student Participation in California Higher Education. Report 90-23.* Sacramento: Author, 1990. 195 pp. (ED 329 200)

California State Postsecondary Education Commission. *Update of Community College Transfer Student Statistics, University of California and the California State University, Fall 1986. Commission Report 87-22.* Sacramento: Author, 1987. 36 pp. (ED 285 632)

California State Postsecondary Education Commission. *Articulating Career Education Programs from High School through Community College to the Baccalaureate Degree. A Report to the Governor, Legislature, and Educational Community in Response to Assembly Bill 3639 (Chapter 1138, Statutes of 1986) Report 87-48.* Sacramento: Author, 1987. 47 pp. (ED 291 927)

Knoell, Dorothy M. *Updated Community College Transfer Student Statistics: Fall 1990 and Full-Year 1989-90. Staff Report Series. Commission Report 91-11.* Sacramento: California State Postsecondary Education Commission, 1991. 22 pp. (ED 338 285)

INTERSEGMENTAL COORDINATING COUNCIL

Salls, Carol, and Others. *Handbook of California Articulation Policies and Procedures, 1989.* Sacramento: Intersegmental Coordinating Council, 1989. 82 pp. (ED 319 460)

Kerschner, Lee R., and Lindahl, Charles W. *Transfer: Key to the Master Plan. Information Agenda Item 1.* Sacramento: California State University, Board of

Trustees, 1989. 33 pp. (ED 305 974)

Minicucci, Catherine, and Others. *An Evaluation of the Transfer Center Pilot Program. Volume 1: Executive Summary and Recommendations. Volume 2: Findings.* Berkeley: Berman, Weiler Associates, 1989. 241 pp. (ED 318 502)

REFERENCES

Bender, L.W. *Spotlight on the Transfer Function: A National Study of State Policies and Practices.* Washington, D.C.: American Association of Community and Junior Colleges, 1990.

California Faces...California's Future: Education for Citizenship in a Multicultural Democracy. The Final Report of the Joint Committee for Review of the Master Plan for Higher Education. March, 1989.

"CCHE Encourages Students to Attend Junior Colleges," *UCLA Daily Bruin*, July 14, 1967.

Center for the Study of Community Colleges. *Non-Liberal Arts Curriculum Study.* September 17, 1992.

Intersegmental Coordinating Council. *Assessing the California Transfer Function: The Transfer Rate and Its Measurement.* February, 1992.

Korb, R. *Postsecondary Student Outcomes: A Feasibility Study.* Washington, D.C.: Department of Education, National Center for Education Statistics, February, 1992.

National Center for Education Statistics. *Digest of Education Statistics.* Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement, 1991.

National Center for Education Statistics. *State Higher Education Profiles, Third Edition.* Washington, D.C.:

U.S. Department of Education, Office of Educational Research and Improvement, 1991.

Pederson, R. "UC President Threatens Transfer for Community College Students," *Community College Week*, Vol. 4, No. 6, October 28, 1991, pp. 1-2.

Richardson, R.C. Jr. and de los Santos, A.G. Jr. "From Access to Achievement: Fulfilling the Promise," *The Review of Higher Education*. Vol. 11, No. 4, Summer, 1988, pp. 323-328.

Trombley, W. "UC, State College Transfer Plan Hit," *Los Angeles Times*. Part I, p. 3, March 29, 1966.